



6712-01

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 15, 27, 73, and 74

[GN Docket No. 12-268, FCC 15-140]

Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: In this document, the Federal Communications Commission (“Commission” or “FCC”) defines when and in what areas 600 MHz Band wireless licensees will be deemed to “commence operations” for the purpose of establishing when secondary and unlicensed users must cease operations and vacate the 600 MHz Band.

DATES: The rules will become effective **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, except for §§ 15.713(b)(2)(iv), 15.713(j)(10) introductory text, 15.715(n), and 73.3700(g)(4)(i), (g)(4)(ii)(B), (g)(4)(iii), and (g)(4)(v), which contain new or modified information collection requirements that require approval by the Office of Management and Budget under the Paperwork Reduction Act. The Commission will publish a document in the Federal Register announcing the effective date for those rules.

FOR FURTHER INFORMATION CONTACT: Paul Malmud of the Wireless Telecommunications Bureau, Broadband Division, at 202-418-0006 or paul.malmud@fcc.gov.

SUPPLEMENTARY INFORMATION: This is a summary of Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, GN Docket No. 12-268, FCC 15-140, adopted October 21, 2015 (“Commencing Operations R&O”). §§ 15.713(b)(2)(iv), 15.713(j)(10) introductory text, 15.715(n), and 73.3700(g)(4)(i), (g)(4)(ii)(B), (g)(4)(iii), and (g)(4)(v) of the rules contain previously adopted new or modified information collection requirements that the Commission previously stated would require approval by the Office of Management and Budget under the Paperwork Reduction Act. 79 FR 48539 (Aug. 15, 2014); and 80 FR 73070 (Nov. 23, 2015). The Commission will

publish a notice in the Federal Register announcing the effective date for these rules, which will be different than the notice for the other adopted rules. The complete text of this document is available for public inspection and copying from 8:00 a.m. to 4:30 p.m. Eastern Time (ET) Monday through Thursday or from 8:00 a.m. to 11:30 a.m. ET on Fridays in the FCC Reference Information Center, 445 12th Street S.W., Room CY-A257, Washington, DC 200554. It is also available on the Commission's Web site at <http://wireless.fcc.gov>, or by using the search function on the ECFS Web page at <http://www.fcc.gov/cgb/ecfs/>. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or telephone the Consumer and Governmental Affairs Bureau at (202) 418-0530 (voice), (202) 18-0432 (TTY).

Supplemental Final Regulatory Flexibility Analysis

As required by the Regulatory Flexibility Act of 1980, as amended ("RFA"), an Initial Regulatory Flexibility Analysis ("IRFA") was incorporated in the Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions 77 FR 69934, Nov. 21, 2012 ("Incentive Auction NPRM"). The Commission sought written public comment on the proposals in the Incentive Auction NPRM, including comment on the IRFA. The Commission subsequently incorporated a Final Regulatory Flexibility Analysis ("FRFA") in Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions 79 FR 48442, (Aug. 15, 2014) ("Incentive Auction R&O"). This Supplemental FRFA conforms to the RFA and incorporates by reference the FRFA in the Incentive Auction R&O. It reflects changes to the Commission's rules arising from defining "commence operations" in this Commencing Operations R&O.

Report to Small Business Administration

The Commission will send a copy of this Commencing Operations R&O, including this Supplemental FRFA, to the Chief Counsel for Advocacy of the Small Business Administration.

Paperwork Reduction Act

This document does not contain new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13.

Congressional Review Act

The Commission will send a copy of the Commencing Operations R&O, including this Supplemental FRFA, in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act. A copy of the Commencing Operations R&O and Supplemental FRFA (or summaries thereof) will also be published in the Federal Register.

I. Introduction

1. In the Incentive Auction R&O, the Commission adopted transition rules that permit low power television and TV translator (“LPTV”) stations, fixed broadcast auxiliary service operations (“BAS”), and unlicensed white space devices (hereinafter, collectively, “secondary and unlicensed users”) to continue operating in the 600 MHz Band, under specified conditions, after the spectrum has been licensed to new 600 MHz Band wireless licensees. The secondary and unlicensed users must vacate the band once the wireless licensee “commences operations” in its licensed 600 MHz spectrum, or on a date certain.¹ In this Commencing Operations R&O, the Commission defines when and in what areas 600 MHz Band wireless licensees will be deemed to “commence operations” for the purpose of establishing when the secondary and unlicensed users must cease operations and vacate the 600 MHz Band in those areas. Specifically, as discussed below, the Commencing Operations R&O establishes that a 600 MHz Band wireless licensee commences operations when it conducts site commissioning tests. The Commencing Operations R&O also creates a limited exception to this rule to permit 600 MHz Band wireless licensees to conduct first field application testing in advance of site commissioning tests under certain circumstances.

II. Discussion

2. Based on our review of the record and as explained below in greater detail, the Commission determines that a 600 MHz Band wireless licensee “commences operations” when it conducts site commissioning tests. In this context, the term is defined to include site activation and commissioning

¹ See Incentive Auction R&O. This Commencing Operations R&O only addresses the requirements relating to secondary and unlicensed users vacating the 600 MHz Band where 600 MHz Band wireless licensees commence operations. Secondary and unlicensed users also may be required to vacate portions of the 600 MHz Band to the extent the auction system assigns a television station to a channel in the 600 MHz Band. See Broadcast Incentive Auction Scheduled to Begin March 29, 2016; Procedures for Competitive Bidding in Auction 1000, Including Initial Clearing Target Determination, Qualifying to Bid, and Bidding in Auctions 1001 (Reverse) and 1002 (Forward), 80 FR 61918, Oct. 14, 2014.

tests using permanent base station equipment, antennas and/or tower locations as part of its site and system optimization in the area of its planned commercial service infrastructure deployment. It is at this juncture that a wireless licensee moves from construction to testing its system, and needs unfettered access to its licensed spectrum to optimize its network in advance of launching commercial service to customers. In addition, the Commencing Operations R&O adopts the proposal that a licensee's notification of commencement will cover the area served by its commercial service infrastructure deployment. It also creates a limited exception to these rules to permit 600 MHz Band wireless licensees to conduct first field application testing in advance of site commissioning testing, under certain circumstances. The Commission's decision balances the policy goal of providing an orderly transition process for secondary and unlicensed users in the band with that of providing 600 MHz Band wireless licensees with exclusive access to their spectrum as soon as they are ready to deploy wireless service in the band.

A. Defining the Timing of Commencing Operations

3. Many months of preparatory work go into planning and deploying a wireless broadband system. As noted by wireless industry commenters, they must engage in extensive construction and testing of equipment and service before licensees can launch commercial service in a particular market. When a wireless licensee establishes permanent base stations, with permanent antennas, and/or tower locations, the licensee will need access to its licensed spectrum to perform site activation and commissioning tests to ensure that the base station performs as expected. The licensee must analyze multiple factors, including but not limited to signal generation, power measurement, frequency error, unwanted emissions, occupied bandwidth, adjacent-channel leakage, and spurious emissions as part of this testing. In sum, the start of the site commissioning testing phase requires the use of licensed frequencies for committed sites in anticipation of bringing up a wireless broadband system in an area. Therefore, a 600 MHz Band wireless licensee "commences operations" when it begins its site commissioning tests.

4. As many commenters point out, choosing site commissioning testing as the benchmark for defining commencement of operations provides a relevant and sustainable sign that 600 MHz Band wireless licensees are committed to deploying service in a particular area and will begin providing

commercial service in the immediate term. Furthermore, it will minimize, to the extent possible, the time between cessation of secondary and unlicensed use and initiation of commercial wireless service. This takes the interests of secondary and unlicensed users into account but still provides uncompromised access to the 600 MHz Band by wireless licensees when they need it. Accordingly, the proposed definition of “commencing operations” appropriately balances the competing interests that must be considered in transitioning the 600 MHz Band to wireless use.

5. The Commission declines to adopt AT&T, CTIA, and the Competitive Carriers Association’s (“CCA”) proposal to define commencement of operations in the 600 MHz Band to include the early stages of pre-deployment. These commenters propose that secondary and unlicensed users should clear the 600 MHz Band as early as the initial transmission of a radio frequency (“RF”) signal by a wireless licensee under its 600 MHz Band license. In support, CTIA and CCA argue that early pre-deployment testing of equipment and services would be best run in actual operating conditions (i.e., without the presence of secondary users) on the wireless carrier’s licensed frequencies. CTIA also opines that if licensees must commit to permanent base station equipment and permanent antenna locations as a prerequisite to commencing operations, carriers will be required to make critical investments before they are able to ascertain their needs. CTIA argues that the unique deployment challenges (such as the presence of broadcast television stations in some areas) for wireless licensees in the 600 MHz Band also justify removal of secondary and unlicensed signals from a licensed area as quickly as possible.

6. Permitting wireless carriers to displace incumbent secondary and unlicensed users at the first RF transmission or in the earliest stages of pre-deployment would be inconsistent with the balancing of interests that was established as part of the transition plan for the 600 MHz Band. The Commission agrees that 600 MHz Band wireless licensees require actual fully modulated waveforms at full operational power, on their specific licensed frequencies, when they are ready to test specific functionality (such as handover and out of band emissions), adjust site coverage, and minimize interference between sites. This requirement is the basis for our definition of commence operations. Other tests that occur earlier in the deployment process, however, such as drive testing for site evaluation and propagation model calibration, typically do not require use of the licensee’s specific licensed frequencies to produce accurate results. For

example, if an LPTV station is located within an anticipated coverage area, a 600 MHz Band wireless licensee can perform these early pre-deployment tests on adjacent or nearby channels, or possibly using narrowband signals on the channel edge, without receiving interference.

7. The Commission also declines to adopt the proposals of the Wireless Internet Service Providers Association (“WISPA”) and Sennheiser Electric Corp. (“Sennheiser”) that commencement of operations should be tied to the actual start of commercial service to the public. According to WISPA, service to the public undergirds any justification for exclusivity and freedom from interference. Defining commencement of operations to mean actual launch of commercial service by the 600 MHz Band wireless licensee, however, would ignore the scope and nature of testing necessary to bring a complex network of sites into synchronized operation to provide seamless communications that meet users’ commercial service quality expectations. As discussed above, once a 600 MHz Band wireless licensee has begun construction of permanent base stations in an area, the licensee needs access to its particular licensed frequencies to accurately assess the performance of these base stations and associated user equipment in an environment free from interference. As CCA describes, providers must conduct multiple facility tests before starting operations, which must be repeated to ensure error- and interference free deployment. These tests are necessary for the licensee to resolve all technical issues prior to the licensed spectrum being used for commercial service. Given that such testing is essential to the provision of commercial quality service, tying commencement of operations to actual launch of commercial service, as suggested by WISPA and Sennheiser, would undermine the needs of the 600 MHz Band licensees and could potentially hinder delivery of service to the public.

8. AT&T and CTIA also argue that the Spectrum Act precludes allowing secondary and unlicensed users to operate in the licensed 600 MHz Band after the spectrum is reallocated for wireless services. The Commission is not persuaded by these arguments. As explained in the Incentive Auction R&O, the Spectrum Act reinforces the Commission’s established spectrum management authority, under which it was decided to allow secondary and unlicensed use of the 600 MHz Band by LPTV stations, BAS, and white space devices on a non-interfering basis for set periods of time, ending with the post-auction transition period or when 600 MHz Band wireless licensees provide the requisite notice that they intend to

commence operations in areas of their geographic licenses where there is a likelihood of receiving harmful interference. Our decision here merely finalizes the process for determining when secondary and unlicensed users need to vacate the 600 MHz Band in areas where a 600 MHz Band wireless licensee needs the spectrum. Nothing in the transition framework that was adopted in the Incentive Auction R&O, or the decisions reached in this Commencing Operations R&O is inconsistent with the Spectrum Act.

B. Area Served Under Commencing Operations Definition

9. The Commission adopts the proposal that a licensee's notification of commencement of operations covers the area served by its planned commercial service infrastructure deployment. The licensee's commercial service deployment area is determined by the specific locations of the base stations it will construct to provide contiguous coverage to its customers in the area; the outermost base station sites form the boundary of the area. Each site included within this boundary must be capable of handing over mobile traffic to at least one other site within the boundary on the same licensed frequency. Many commenters support defining the area covered by a licensee's notification of commencement in a way that allows secondary and unlicensed users access to spectrum that might otherwise lay fallow until wireless operations begin in all geographic areas under a license rather than just in certain areas.

10. We decline to adopt the proposals of AT&T, CCA, and CTIA that would require secondary and unlicensed users to vacate the entire Partial Economic Area ("PEA") when a 600 MHz Band wireless licensee commences operations in just one particular portion of a PEA. These commenters argue that granting licensees access to the entire PEA will free them of the burden of continually having to update data on the scope of their deployment merely to obtain interference protection over a changing deployment area. The Commission is not persuaded that this decision herein will impose an undue burden on 600 MHz Band wireless licensees. While a 600 MHz Band wireless licensee may need to provide notice for new areas, the rules will permit these licensees to plan for, and roll out service to, large or small areas of deployment, as they see fit, based on their business plans and needs, rather than predefined geographic boundaries. Although allowing 600 MHz Band wireless licensees exclusive access to their entire licensed area upon their first RF transmission might be less burdensome, it could result in the spectrum lying fallow for a longer period of time than is necessary. Instead, this decision maintains

the balance struck in the Incentive Auction R&O to promote access to the 600 MHz Band for wireless licensees when and where they need it while providing an orderly transition process for secondary and unlicensed users that currently are serving consumer needs.

11. Further, while a license issued for the 600 MHz Band does include the right to exclusive use, it does not include the immediate right to exclude for the entire license area. 600 MHz Band wireless licensees will have all of the rights and obligations conferred by the Commission's Incentive Auction R&O, including the right to exclusive use in areas where the licensee commences operations and provides the requisite notification to secondary and unlicensed users prescribed by the transition procedures adopted therein. Until the licensee commences operations in areas of their geographic licenses where there is a likelihood of receiving harmful interference, secondary and unlicensed users retain their right to operate in the 600 MHz Band. The approach regarding the area to be covered by a 600 MHz Band wireless licensee's notification is consistent with the Commission's prior spectrum management decisions, and its other decisions regarding the transition process in the Incentive Auction R&O.

C. First Field Application Testing

12. Although the wireless industry generally opposed the Commission's proposed definition of commencement of operations, it has, through CTIA, suggested "a compromise" that would modify this definition to include "market testing" in addition to site commissioning testing. CTIA describes market testing as a phase prior to site commissioning in which the wireless licensee deploys prototype equipment in a limited number of markets to determine if the equipment actually performs as expected in the real-world (as compared to laboratory performance) and if the propagation models and software that have been developed accurately model the capabilities of the new radiofrequency equipment. CTIA states that this testing is conducted in a limited number of markets –typically . . . only a fraction of the areas where full commercial launch will occur – and typically within only a portion of the market area – a cluster or clusters of base station sites. More specifically, CTIA states that such testing usually involves two to six test areas, comprising from as little as 10 sites to 200-300 sites, covering generally no more than 1,000 square miles. CTIA asserts that if 600 MHz Band wireless licensees are not able to conduct market testing of new equipment, software, and possibly technology on their licensed frequencies without the

presence of secondary and unlicensed users, deployment of mobile broadband services in the band will be delayed, which it argues would be contrary to Congress's paramount objective in granting the FCC authority to hold the incentive auction.

13. Subsequently, AT&T responded to Commission staff inquiries about how it conducts what it terms first field application ("FFA") testing. According to AT&T, FFA testing for a new spectrum band consists of three main areas of evaluation – network hardware, software, and devices [and] . . . incorporates as many different combinations of morphologies (rural, suburban and urban) and network configurations as practicable, to emulate the actual environments found in the network. AT&T further explains that base station hardware testing covers all possible combinations of baseband and radiohead configurations at a cluster of 20-30 sites to ensure the hardware is working as designed and is compatible with existing network facilities. Testing how devices interoperate with hardware and software in the new band typically requires a cluster of 50-150 sites. Finally, AT&T states that software testing to ensure that new hardware and devices are fully operational requires the largest testing area, "as many as 200-300 sites, to cover as many possible combinations of morphology and hardware and software configurations" as exist in a nationwide network. AT&T indicates that it performs FFA testing in areas that are among the first areas where it plans to deploy commercial service, and asserts FFA testing in 600 MHz will be critical because there has been no prior commercial wireless deployment in the band.

14. As an initial matter, the terminology that the wireless industry uses to refer to this type of testing appears to vary from operator to operator. For convenience, AT&T's term – first field application – which conveys more precisely than other terms the nature and scope of this testing will be used. The FFA testing that CTIA and AT&T describe as being essential to timely deployment of 600 MHz Band wireless service would not fit squarely within the definition of "commencing operations" in this Commencing Operations R&O, because FFA testing may involve equipment, antennas and locations that are not permanent. The Commission declines to revise our general definition of when a carrier will be deemed to "commence operations" as CTIA recently advocates. Nevertheless, it is in the public interest to permit 600 MHz Band wireless licensees to undertake FFA testing on their licensed frequencies in limited areas free from potential interference from secondary and unlicensed users, because such testing will speed

deployment of the 600 MHz Band and accelerate the use of these frequencies by 600 MHz wireless licensees to provide service to consumers. The limited exception established for FFA testing will not upset the balance between promoting ready access to the 600 MHz Band for wireless licensees while providing an orderly transition process for secondary and unlicensed users.

15. Therefore, the Commission is providing a limited exception to the rule defining commencement of operations, to permit 600 MHz Band licensees to conduct FFA testing on their licensed frequencies in advance of site activation and commissioning testing without the presence of secondary and unlicensed users. Based on information presented by AT&T and on FCC staff network engineering expertise, the Commission expects that FFA testing pursuant to this exception would be done in a small number of areas, with the parameters presented as typical by CTIA constituting the upper bound on what the Commission would consider reasonable. In most cases, FFA testing should require fewer test areas, fewer sites,² and cover more restricted geographic areas. Further, the Commission expects that FFA testing would be done only in license areas where 600 MHz Band wireless licensees expect to rapidly deploy service to end users, and that this deployment will follow the FFA testing phase as soon as possible. In the areas in which a 600 MHz Band licensee intends to take advantage of this exception, it must notify secondary and unlicensed users of the need to vacate the spectrum by following the transition procedures adopted in the Incentive Auction R&O and the Amendment of Part 15 of the Commission's Rules for Unlicensed Operations in the Television Bands, Repurposed 600 MHz Band, 600 MHz Guard Bands and Duplex Gap, and Channel 37 80 FR 73043, (Nov. 23, 2015) ("Part 15 Report and Order"). In portions of the license area that do not contain sites involved in the licensee's FFA testing, secondary and unlicensed users will be allowed to continue operating until the close of the transition period or when the licensee notifies them of its intent to commence operations as defined in this Commencing Operations R&O.

² In particular, it is our understanding that in many cases, FFA software testing, which CTIA and AT&T say typically involves 200-300 sites, may take place without implicating radiofrequency transmissions. With respect to deployment of the 600 MHz Band, the Commission expects that 600 MHz Band wireless licensees conducting software testing in such situations would not notify secondary and unlicensed users to vacate the band for these tests.

D. Other Issues

16. We reject as untimely requests for reconsideration of several commenters to modify the transition procedures established in the Incentive Auction R&O.³ The Commission previously determined in the Incentive Auction R&O the circumstances under which secondary and unlicensed users may continue operating in the 600 MHz Band after the spectrum has been licensed for wireless services and set forth specific requirements for when those secondary and unlicensed users must vacate the band. In addition, the Commission adopted procedures that wireless licensees must use to notify secondary and unlicensed users that they are commencing operations. None of the aforementioned parties filed petitions for reconsideration of our decisions on the issues they now seek to have modified. The Commission rejects these requests as untimely petitions for reconsideration. With respect to CTIA's concern that competitively sensitive information provided to white spaces database administrators needs to be treated as confidential, this issue has already been addressed in the Part 15 Report and Order.

17. Finally, the Commission is redesignating Section 27.19 of the Commission's rules as Section 27.1321 and adding two undesignated center headings to Subpart N (600 MHz Band) of Part 27. Section 27.19 applies only to 600 MHz Band licensees and therefore should be included in Subpart N, which is the general subtitle for the 600 MHz Band. The Commission is also adding the additional undesignated center headings to provide greater clarity to Subpart N. None of these rule changes require prior notice

³ Specifically, AT&T argues that the Commission should require that all secondary and unlicensed users cease operations by the end of the 39-month Post-Auction Transition Period or at an earlier date if a licensee provides 120 days' notice that it intends to commence operations. Comments of AT&T at 3-4 (filed May 1, 2015). AT&T also requests an expedited enforcement mechanism to clear unlicensed or secondary users that fail to vacate the spectrum within the applicable timeframe. *Id.* at 10. CTIA asks that wireless licensees be granted control of the process for, and details of, notice of commencement of service. Comments of CTIA – The Wireless Association at 9 (filed May 1, 2015). CP Communications and Shure requested that licensed professional microphone users be treated like LPTV stations and allowed to continue operating indefinitely in the 600 MHz Band until they receive advance written notice that a 600 MHz Band licensee intends to commence operations and that the microphone user will cause interference to that wireless provider. Comments of CP Communications, LLC at 2 (filed May 1, 2015); Reply Comments of Shure Incorporated at 3 (filed May 18, 2015). Shure also asks that a wireless licensee be required to certify that it has begun site commissioning tests and that all power systems and backhaul connectivity are installed and operational. Reply Comments of Shure Incorporated at 7 (filed May 18, 2015). Finally, WISPA argues that a sixty day advance notification period should be provided to unlicensed users before they must vacate the 600 MHz Band. Comments of the Wireless Internet Service Providers Association at 4 (filed May 1, 2015). See also Reply Comments of Open Technology Institute at New America and Public Knowledge at 19 (filed May 18, 2015) (“A substantial but not overly long notification period [of 30 days] benefits both licensees and unlicensed operators.”).

and opportunity for comment under the Administrative Procedure Act (APA) because Section 553(b)(3)(B) of the APA provides exceptions to the notice-and-comment requirement when, among other things, the agency finds for good cause that the notice and comment procedures are impracticable, unnecessary, or contrary to the public interest. These rule changes are non-substantive and editorial in nature. As such, they constitute routine, “clean-up” matters that entail no substantive decisions of any consequence or significance to industry or the general public. Accordingly, it is unnecessary, within the meaning of Section 553(b)(3)(B), to provide notice and opportunity for comment before adopting these rule revisions. For the same reason, there is good cause to make these non-substantive, editorial revisions of the rules.

III. Supplemental Final Regulatory Flexibility Analysis

18. As required by the Regulatory Flexibility Act of 1980, as amended (“RFA”), an Initial Regulatory Flexibility Analysis (“IRFA”) was incorporated in Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions 77 FR 69934, Nov. 21, 2012 (“Incentive Auction NPRM”).

The Commission sought written public comment on the proposals in the Incentive Auction NPRM, including comment on the IRFA. The Commission subsequently incorporated a Final Regulatory Flexibility Analysis (“FRFA”) in the Incentive Auction R&O. This Supplemental FRFA conforms to the RFA and incorporates by reference the FRFA in the Incentive Auction R&O. It reflects changes to the Commission’s rules arising from defining “commence operations” in this Commencing Operations R&O.

A. Need for, and Objectives of, the Order

19. In the Incentive Auction R&O, the Commission adopted transition rules that permit low power television (“LPTV”), TV translator stations, fixed broadcast auxiliary service operations (“BAS”), and unlicensed white space devices (hereinafter, collectively, “secondary and unlicensed users”) to continue operating in the 600 MHz Band after the spectrum has been licensed for wireless services (hereinafter “600 MHz Band”). Those secondary and unlicensed users must vacate once the wireless licensee “commences operations” in its licensed 600 MHz spectrum, or a date certain. Thereafter, the Commission issued the Comment Sought on Defining Commencement of Operations in the 600 MHz Band 80 FR 18185, (Apr. 3, 2014) (“Commencing Operations PN”) and sought comment on the

appropriate definition of “commence operations” in light of the Commission’s objective to accomplish an orderly transition of unlicensed and secondary users out of the 600 MHz Band. By this Commencing Operations R&O, the Commission defines when and in what areas 600 MHz Band wireless licensees will be deemed to “commence operations” for the purpose of establishing when those secondary and unlicensed operators must cease operations and vacate the 600 MHz Band.

20. The Commencing Operations R&O affirms the Commission’s commitment to implement a transition process that promotes ready access to the repurposed spectrum by 600 MHz Band wireless licensees when and where they need it, while at the same time providing for an orderly transition process for secondary and unlicensed users that currently are serving various important consumer needs. Specifically, in the Commencing Operations R&O, the Commission defines “commence operations” as when a 600 MHz Band licensee begins pre-launch site activation and commissioning tests using permanent base station equipment, antennas and/or tower locations as part of its site and system optimization in the area of its planned commercial service infrastructure deployment (hereinafter “site commissioning tests”). It is at this juncture that a wireless licensee moves from construction to testing its system, and needs unfettered access to its licensed spectrum to optimize its network in advance of launching commercial service to customers. In addition, the Commission adopts the proposal that a licensee’s notification of commencement will cover the area served by its commercial service infrastructure deployment. It also creates a limited exception to these rules to permit 600 MHz Band wireless licensees to conduct first field application testing in advance of site commissioning testing using their licensed frequencies in limited areas. Our decision balances the policy goal of providing an orderly transition process for secondary and unlicensed users in the band with that of providing 600 MHz Band wireless licensees with exclusive access to their spectrum as soon as they are ready deploy wireless service in the band.

B. Summary of Significant Issues Raised by Public Comments

21. No commenters directly responded to the IRFA in the Incentive Auction NPRM. Nonetheless, the FRFA in the Incentive Auction R&O addressed concerns in the record about the impact on small businesses of various auction design issues. No commenters raised concerns regarding the impact on

small businesses of the proposed definition of “commence operations” in the Commencing Operations PN. Furthermore, the SBA Chief Counsel filed no comments in this matter.

C. Description and Estimate of the Number of Small Entities to Which Rules Will Apply

22. The RFA directs the Commission to provide a description of and, where feasible, an estimate of the number of small entities that will be affected by the adopted rules. The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small government jurisdiction.” In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act. A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.

23. As noted, the Commission incorporated a FRFA into the Incentive Auction R&O. In that analysis, the Commission described in detail the various small business entities that may be affected by the final rules, including wireless telecommunications carriers, manufacturers of unlicensed devices, and television broadcasting. This Commencing Operations R&O amends the final rules adopted in the Incentive Auction R&O affecting wireless telecommunications carriers, manufacturers of unlicensed devices, and television broadcasting. This Supplemental FRFA incorporates by reference the description and estimate of the number of small entities from the FRFA in the Incentive Auction R&O.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

24. In Section D of the FRFA, incorporated into the Incentive Auction R&O, the Commission described in detail the projected recordkeeping, reporting, and other compliance requirements for small entities arising from the rules adopted in the Incentive Auction R&O. This Supplemental FRFA incorporates by reference the requirements described in Section D of the FRFA. Moreover, in this Commencing Operations R&O, the Commission is not requiring any additional reporting, recordkeeping, or other compliance requirements for small entities other than those requirements that were already required by the Incentive Auction R&O.

E. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant

Alternatives Considered

25. The RFA requires an agency to describe any significant alternatives that it has considered in developing its approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities. The Commission has minimized the significant economic impact on small entities because no new reporting, recordkeeping, or other compliance requirements result from the Commencing Operations R&O. Rather, any such reporting, recordkeeping, or compliance requirements were adopted previously in the Incentive Auction R&O. Furthermore, alternative proposals in the record would have defined “commence operations” such that it would provide immediate access to the entire licensed area instead of just the area of planned commercial service infrastructure deployment. This proposal would have had a larger economic impact on secondary and unlicensed operations, many of which are small entities, because it would have required a greater number of such operations to vacate the 600 MHz Band sooner than is required under the definition of “commence operations” that is adopted in the Commencing Operations R&O. The Commission believes the definition of “commence operations” it has adopted strikes the appropriate balance by promoting ready access to the repurposed spectrum by 600 MHz Band wireless licensees when and where they need it, while at the same time providing for an orderly transition process for secondary and unlicensed users that currently are serving various important consumer needs.

F. Federal Rules that Might Duplicate, Overlap, or Conflict with the Rules

26. None.

List of Subjects in 47 CFR Parts 15, 27, 73, and 74

Communications equipment, Radio, Communications common carriers

Gloria J. Miles,
Federal Register Liaison.
Office of the Secretary.

Final Rules

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR parts 15, 27, 73, and 74 as follows:

PART 15—RADIO FREQUENCY DEVICES

1. The authority citation for part 15 continues to read as follows:

Authority: 47 U.S.C. 154, 302a, 303, 304, 307, 336, 544a, and 549.

2. Section 15.236 is amended by revising paragraphs (c)(2) and (e)(2) to read as follows:

§ 15.236 Operation of wireless microphones in the bands 54-72 MHz, 76-88 MHz, 174-216 MHz, 470-608 MHz and 614-698 MHz.

* * * * *

(c) * * *

(2) Frequencies in the 600 MHz service band on which a 600 MHz service licensee has not commenced operations, as defined in § 27.4 of this chapter. Operation on these frequencies must cease no later than the end of the post-auction transition period, as defined in § 27.4 of this chapter. Operation must cease immediately if harmful interference occurs to a 600 MHz service licensee.

* * * * *

(e) * * *

(2) The following distances outside of the area where a 600 MHz service licensee has commenced operations, as defined in § 27.4 of this chapter.

Type of station	Separation distance in kilometers	
	Co-channel	Adjacent channel
Base	7	0.2

Mobile	35	31
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3. Section 15.707 is amended by revising paragraph (a)(5) to read as follows:

§ 15.707 Permissible channels of operation.

(a) * * *

(5) 600 MHz service band. White space devices may operate on frequencies in the 600 MHz service band in areas where 600 MHz band licensees have not commenced operations, as defined in § 27.4 of this chapter.

* * * * *

4. Section 15.711 is amended by revising paragraph (a) to read as follows:

§ 15.711 Interference avoidance methods.

* * * * *

(a) Geo-location required. White space devices shall rely on a geo-location capability and database access mechanism to protect the following authorized service in accordance with the interference protection requirements of § 15.712: digital television stations, digital and analog Class A, low power, translator and booster stations; translator receive operations; fixed broadcast auxiliary service links; private land mobile service/commercial radio service (PLMRS/CMRS) operations; offshore radiotelephone service; low power auxiliary services authorized pursuant to §§ 74.801 through 74.882 of this chapter, including licensed wireless microphones; MVPD receive sites; wireless medical telemetry service (WMTS); radio astronomy service (RAS); 600 MHz service band licensees where they have commenced operations, as defined in § 27.4 of this chapter; and unlicensed wireless microphones used by venues of large events and productions/shows as provided under § 15.713(j)(9). In addition, protection shall be provided in border areas near Canada and Mexico in accordance with § 15.712(g).

* * * * *

5. Section 15.712 is amended by revising paragraph (i) introductory text to read as follows:

§ 15.712 Interference protection requirements.

* * * * *

(i) 600 MHz service band: Fixed and personal/portable devices operating in the 600 MHz Service Band must comply with the following co-channel and adjacent channel separation distances outside the defined polygonal area encompassing the base stations or other radio facilities deployed by a part 27 600 MHz Service Band licensee that has commenced operations, as defined in § 27.4 of this chapter.

* * * * *

6. Section 15.713 is amended by revising paragraphs (b)(2)(iv) and (j)(10) introductory text to read as follows:

§ 15.713 White space database.

* * * * *

(b) * * *

(2) * * *

(iv) 600 MHz service band operations in areas where the part 27 600 MHz service licensee has commenced operations, as defined in § 27.4 of this chapter.

* * * * *

(j) * * *

(10) 600 MHz service in areas where the part 27 600 MHz band licensee has commenced operations, as defined in § 27.4 of this chapter:

* * * * *

7. Section 15.715 is amended by revising paragraph (n) to read as follows:

§ 15.715 White space database administrator.

* * * * *

(n) Establish procedures to allow part 27 600 MHz service licensees to upload the registration information listed in § 15.713(j)(10) for areas where they have commenced operations, as defined in § 27.4 of this chapter, and to allow the removal and replacement of registration information in the database when corrections or updates are necessary.

* * * * *

PART 27—MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

8. The authority citation for part 27 continues to read as follows:

Authority: 47 U.S.C. 154, 301, 302a, 303, 307, 309, 332, 336, 337, 1403, 1404, 1451, and 1452, unless otherwise noted.

9. Section 27.4 is amended by adding the definition “commence operations” in alphabetical order to read as follows:

§ 27.4 Terms and definitions.

* * * * *

Commence operations. A 600 MHz Band licensee is deemed to commence operations when it begins pre-launch site activation and commissioning tests using permanent base station equipment, antennas and/or tower locations as part of its site and system optimization in the area of its planned commercial service infrastructure deployment.

* * * * *

§ 27.19 [Redesignated as § 27.1321]

10. Section 27.19 is redesignated as § 27.1321 and transferred from subpart B to subpart N.

Subpart N [Amended]

11. Subpart N is amended by adding an undesignated center heading that precedes § 27.1300 to read as “Competitive Bidding Provisions”

12. Subpart N is amended by adding an undesignated center heading that precedes § 27.1320 to read as “Coordination/Notification Requirements”

PART 73—RADIO BROADCAST SERVICES

13. The authority citation for part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 303, 334, 336, and 339.

14. Section 73.3700 is amended by revising paragraphs (g)(4)(i), (g)(4)(ii)(B), (g)(4)(iii), and (g)(4)(v) to read as follows:

§ 73.3700 Post-incentive auction licensing and operation.

* * * * *

(g) * * *

(4) * * *

(i) A wireless licensee assigned to frequencies in the 600 MHz band under part 27 of this chapter must notify low power TV and TV translator stations of its intent to commence operations, as defined in § 27.4 of this chapter, and the likelihood of receiving harmful interference from the low power TV or TV translator station to such operations within the wireless licensee's licensed geographic service area.

(ii) * * *

(B) Indicate the date the new wireless licensee intends to commence operations, as defined in § 27.4 of this chapter, in areas where there is a likelihood of receiving harmful interference from the low power TV or TV translator station; and

* * * * *

(iii) Low power TV and TV translator stations may continue operating on frequencies in the 600 MHz band assigned to wireless licensees under part 27 of this chapter until the wireless licensee commences operations, as defined in § 27.4 of this chapter, as indicated in the notification sent pursuant to this paragraph.

* * * * *

(v) Low power TV and TV translator stations that are operating on the UHF spectrum that is reserved for guard band channels as a result of the broadcast television incentive auction conducted under section 6403 of the Spectrum Act may continue operating on such channels until the end of the post-auction transition period as defined in § 27.4 of this chapter, unless they receive notification from a new wireless licensee pursuant to the requirements of paragraph (g)(4) of this section that they are likely to cause harmful interference in areas where the wireless licensee intends to commence operations, as defined in § 27.4 of this chapter, in which case the requirements of paragraph (g)(4) of this section will apply.

* * * * *

PART 74—EXPERIMENTAL RADIO, AUXILIARY, SPECIAL BROADCAST AND OTHER PROGRAM DISTRIBUTIONAL SERVICES

15. The authority citation for part 74 continues to read as follows:

Authority: 47 U.S.C. 154, 302a, 303, 307, 309, 336 and 554.

16. Section 74.602 is amended by revising paragraph (h)(5)(ii) introductory text to read as follows:

§74.602 Frequency assignment.

* * * * *

(h) * * *

(5) * * *

(ii) A wireless licensee assigned to frequencies in the 600 MHz band under part 27 of this chapter must notify the licensee of a TV STL, TV relay station, or TV translator relay station of its intent to commence operations, as defined in § 27.4 of this chapter, and the likelihood of harmful interference from the TV STL, TV relay station, or TV translator relay station to those operations within the wireless licensee's licensed geographic service area.

* * * * *

17. Section 74.802 is amended by revising paragraph (f) to read as follows:

§74.802 Frequency assignment.

* * * * *

(f) Operations in 600 MHz band assigned to wireless licensees under part 27 of this chapter. A low power auxiliary station that operates on frequencies in the 600 MHz band assigned to wireless licensees under part 27 of this chapter must cease operations on those frequencies no later than the end of the post-auction transition period, as defined in § 27.4 of this chapter. During the post-auction transition period, low power auxiliary stations will operate on a secondary basis to licensees of part 27 of this chapter, i.e., they must not cause to and must accept harmful interference from these licensees, and must comply with the distance separations in § 15.236(e)(2) of this chapter from the areas specified in § 15.713(j)(10) of this chapter in which a licensee has commenced operations, as defined in § 27.4 of this chapter.

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